

# **Air Quality in the California-Mexico Border Region**

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# Border Region Overview

- ◆ Fast growth rate
- ◆ Shared environmental problems
- ◆ Two distinct binational airsheds

# Air Quality Monitoring Stations

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	<u>Ozone</u>	<u>CO</u>	<u>PM10</u>	<u>Toxics</u>
San Diego County	9	5	6	2
Imperial County	6	3	6	1
Mexicali	3	3	5	1
Tijuana	3	3	5	--
Rosarito	1	1	1	1
Tecate	1	1	1	--

# Air Quality Assessment

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	<u>Ozone</u>		<u>CO</u>	<u>PM10</u>
	(1-hr)	(8-hr)		
San Diego	✓	✗	✓	✓
Tijuana	✓	✗	✓	✗
Imperial County	✗	✗	✗	✗
Mexicali	✗	✗	✗	✗

✓ = Meets U.S. Air Quality Standard

✗ = Does not meet U.S. Air Quality Standard

# Ambient Air Quality Standards

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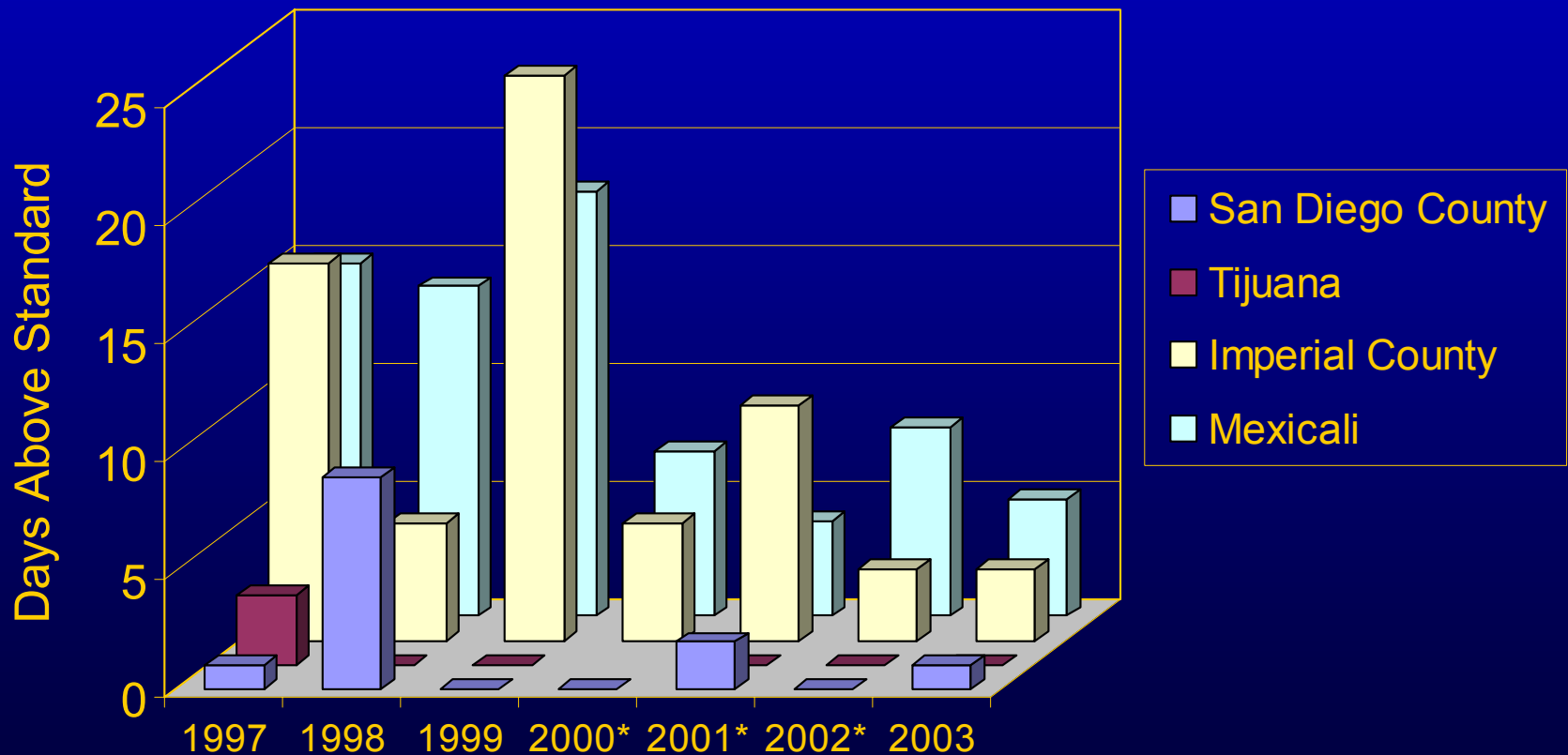
	<u>U.S.</u>	<u>Mexico</u>	<u>Units</u>
Ozone (1 hr)	0.12	0.11	ppm
Ozone (8 hr)	0.08	---	ppm
CO (8 hr)	9	11	ppm
PM10 (24 hr)	150	150	$\mu\text{g}/\text{m}^3$

# Ozone Trends

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- ◆ San Diego County attained U.S. 1-hr standard in 2001
- ◆ No exceedances recorded in Tijuana since 1997
- ◆ Sharp decline in number of exceedances in Imperial County-Mexicali

# Days Exceeding National 1-Hr Ozone Standard



\*Limited Data Available for Mexicali

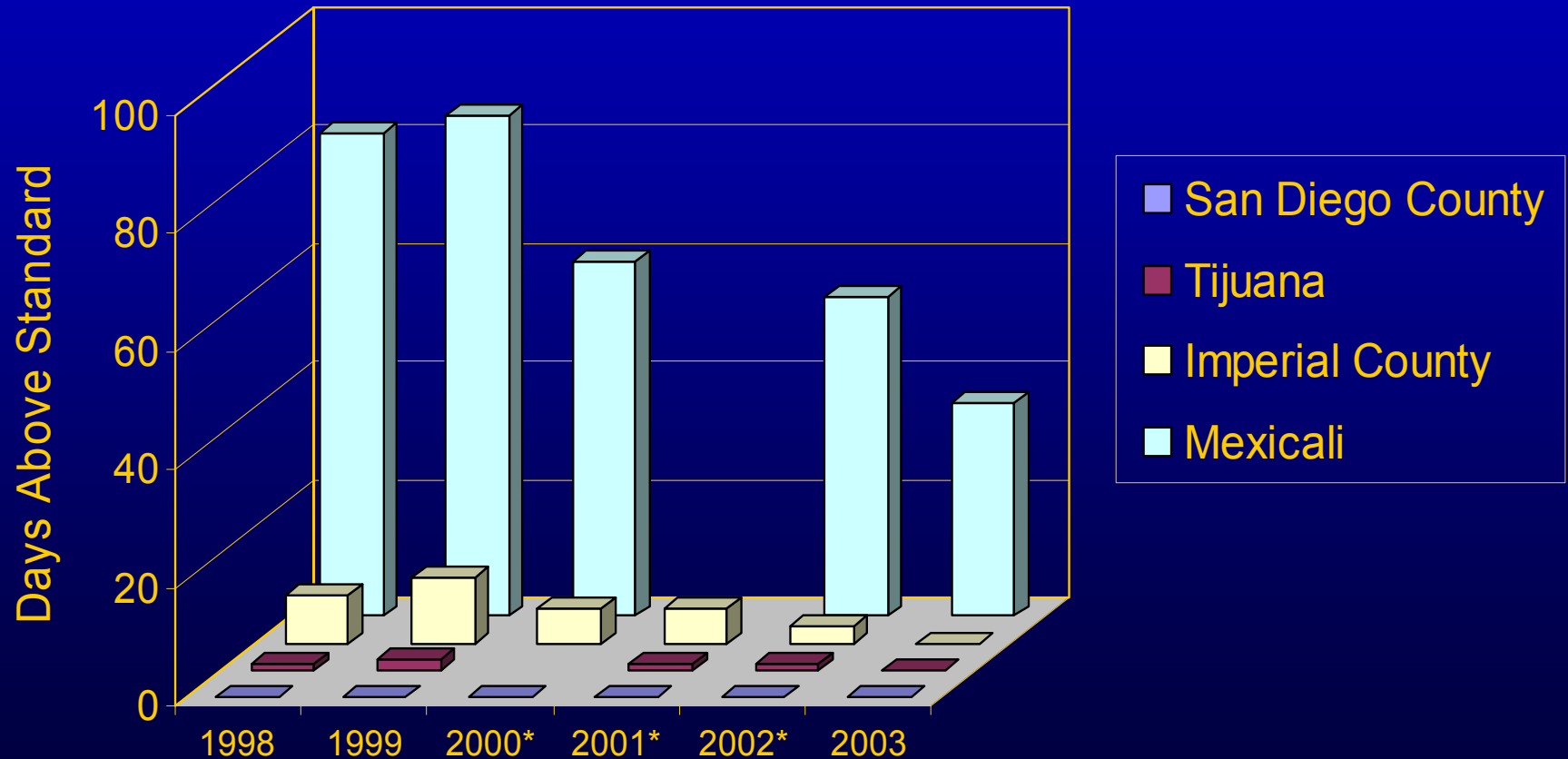
# Carbon Monoxide Trends

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- ◆ San Diego has not exceeded the U.S. national standard since 1990
- ◆ Tijuana averages 1 exceedance per year
- ◆ Sharp decline in number of exceedances in Calexico and Mexicali



# Days Exceeding National CO 8-Hour Standard



\*Limited Data Available for Mexicali

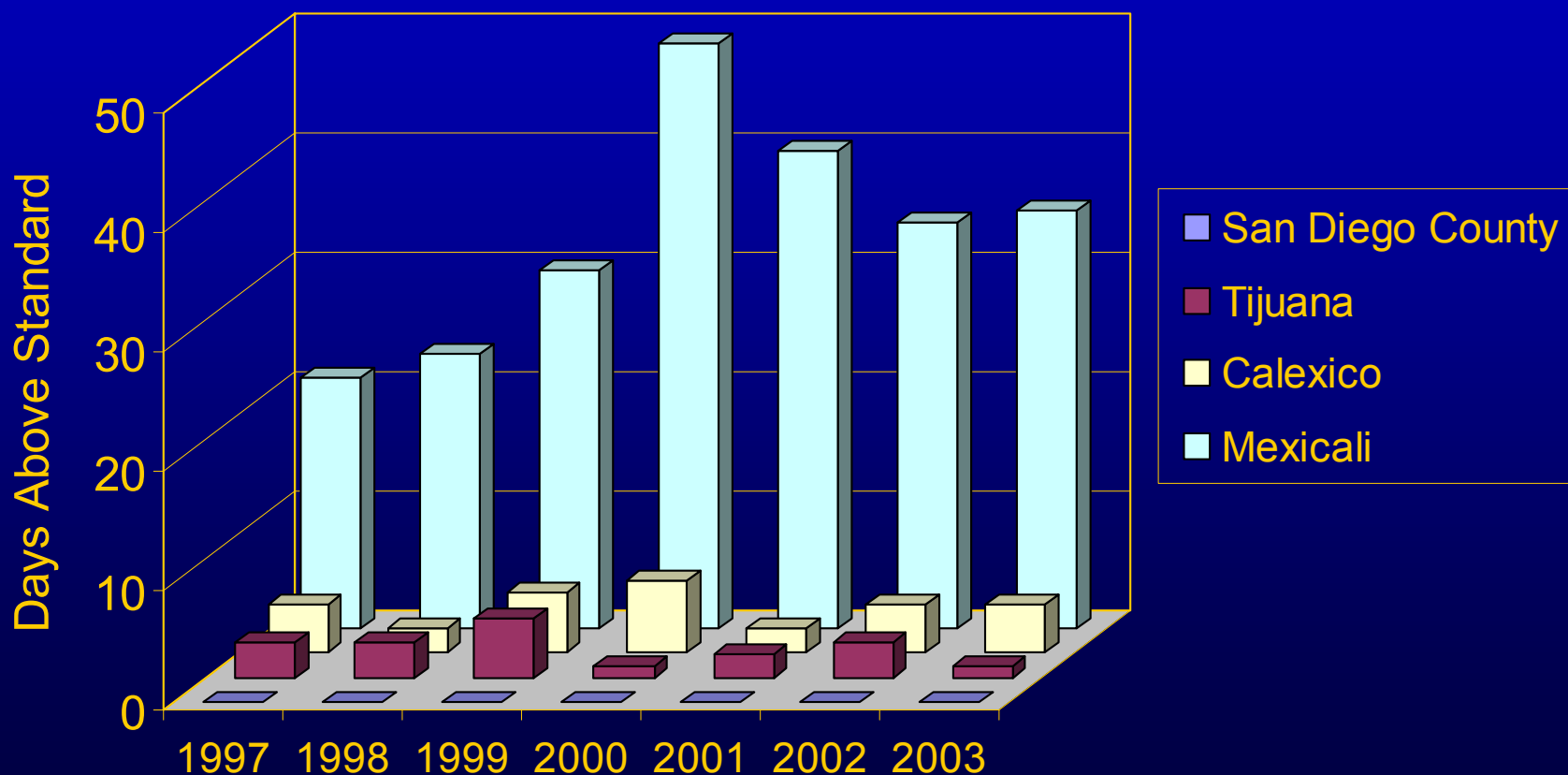
# PM10 Trends

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- ◆ San Diego has not exceeded the national 24-hour standard since 1993
- ◆ Tijuana averages 3 measurements exceeding the standard per year
- ◆ Imperial County averages 4 measured exceedances per year in Calexico
- ◆ Number of exceedances in Mexicali has increased since 1997

# Measured Days Exceeding National PM10 Standard\*

\*1-in-6 day sampling



# Toxic Air Contaminants

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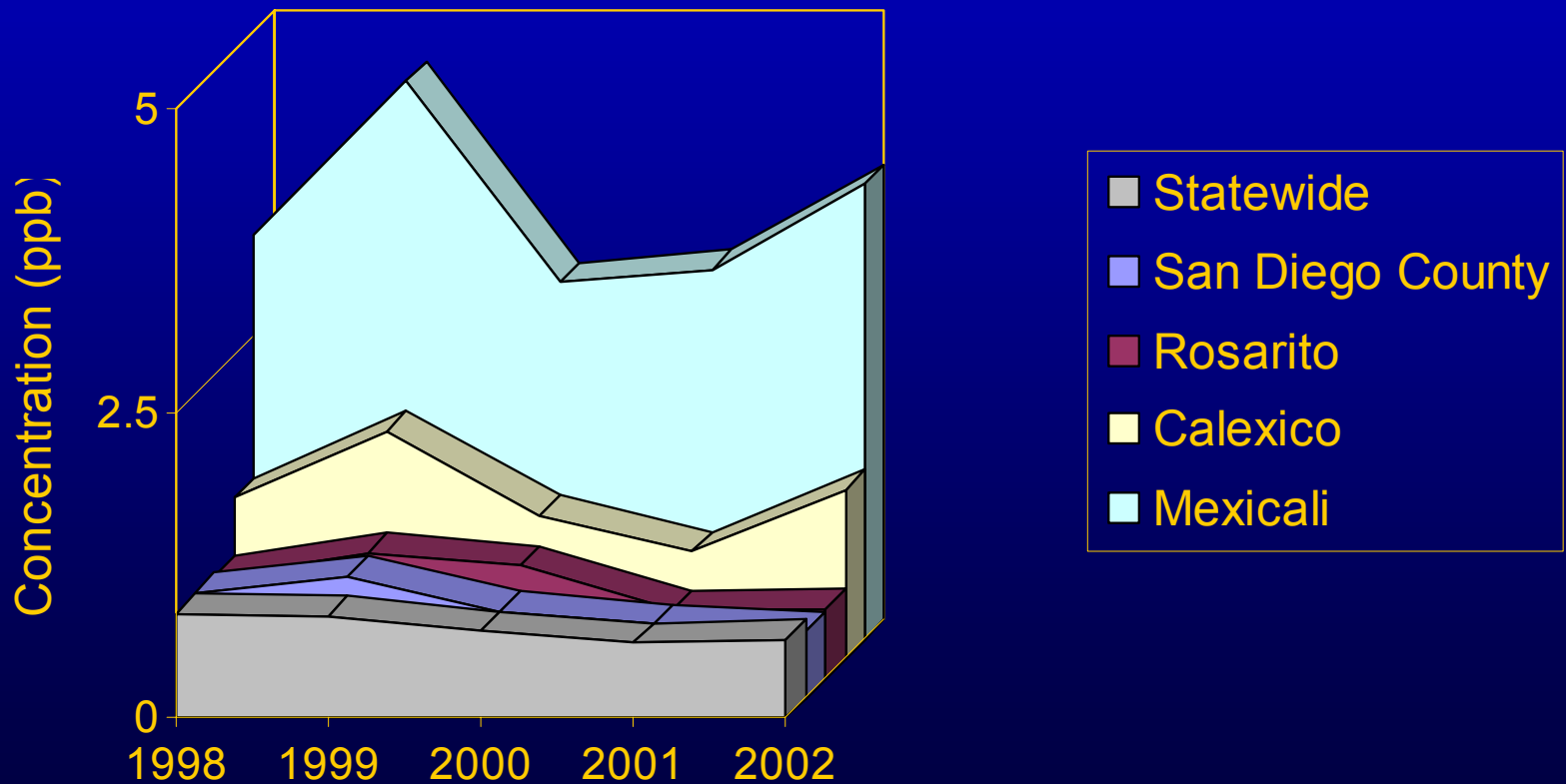
- ◆ San Diego and Rosarito air toxics levels close to statewide average
- ◆ Calexico levels among highest in the state
- ◆ Mexicali levels higher than any area in California

# Benzene

## Average Concentrations

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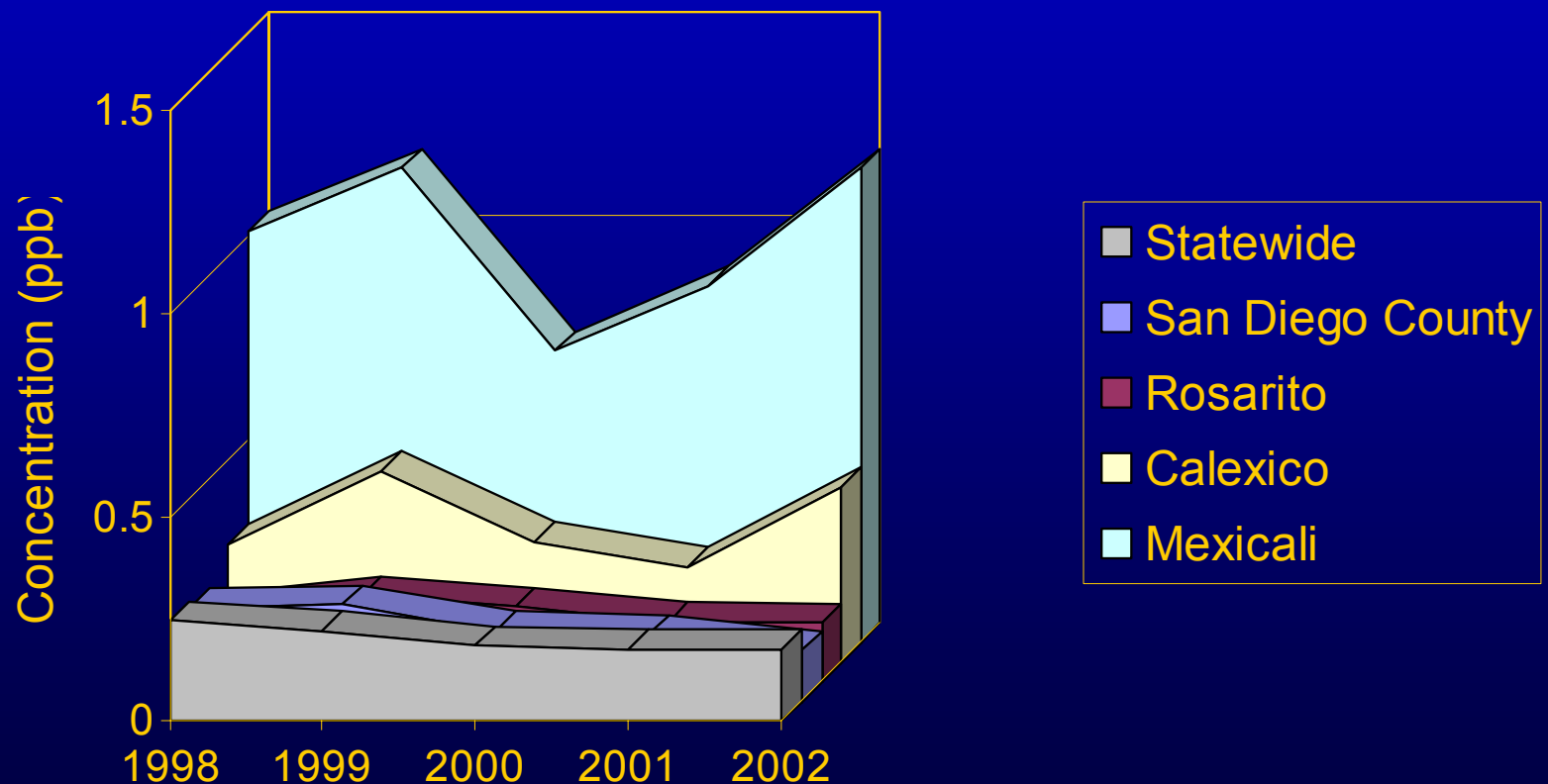
1-in-12 day sampling



# 1,3-Butadiene Average Concentrations

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1-in-12 day sampling



# Pollution Sources

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- ◆ Motor vehicles are primary source of ozone precursors, CO, and toxics
- ◆ Stationary sources also contribute ozone precursors and some toxics
- ◆ Unpaved roads and windblown emissions are primary contributors to particulate pollution

# Conclusions

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## ◆ San Diego-Tijuana

- In attainment or near attainment for most pollutants

## ◆ Imperial County-Mexicali

- Some improvement in ozone and CO
- High PM10 and toxic air contaminant levels in Mexicali
- Significant cross-border pollutant transport